The answer to this question is thought to be closely linked to fundamental interactions between subatomic particles that violate time reversal symmetry. Although it has been known since the late 1960's that the Weak nuclear force slightly violates time reversal, its strength is far too feeble to explain the present day abundance of matter (as opposed to antimatter) in the Universe. The presence of a permanent electric dipole moment (EDM) of a particle is an unambiguous signature of an underlying time reversal symmetry violating interaction. A very sensitive technique to search for an EDM is a clock comparison experiment. In such an experiment, a clock is formed by placing a spin-polarized particle, such as a nucleus, in a very stable and very uniform magnetic field. The clock or spin precession frequency is then observed while an electric field is applied to the particle. An EDM would couple to this electric field causing a very small shift in the observed clock frequency. Over the last sixty years, all searches for an EDM based on this and similar techniques have yielded a null result. Because the observation of a nonzero EDM would have far reaching consequences, there is a world wide effort by many groups to search for an EDM in several different systems. I will describe a new effort underway in Munich, Germany that utilizes the world’s most magnetically quiet environment and a mixture of laser magnetized Xe-129 and He-3 gas.